

WHAT IS CLAIMED IS:

1. A device for keeping electric connection of a rotating shaft to a power source, comprising:

a power transmitting and securing member in electric connection to said power source and said rotating shaft for receiving electricity from said power source; and

a power transmitting and resilient member compressed between an axial end surface of said rotating shaft and said power transmitting and securing member in an axial direction of said rotating shaft for continuously urging against and transmitting said electricity to said rotating shaft.

2. The device according to claim 1 wherein said power transmitting and resilient member is a metallic spring.

3. The device according to claim 1 wherein said power transmitting and resilient member is a conductive rubber.

4. The device according to claim 1 wherein said rotating shaft has a recess on a circumferential surface thereof for engaging with said power transmitting and securing member to confine said power transmitting and resilient member therebetween.

5. The device according to claim 4 wherein said power transmitting and securing member comprises:

a shaft sheath in electric connection with said power source, covering said axial end surface of said rotating shaft and having a slit aligned with said recess of said rotating shaft; and

a clipping element penetrating through said slit of said shaft sheath to engage with said rotating shaft at said recess so as to compress said power transmitting and resilient member between said shaft sheath and said axial end surface of

said rotating shaft.

6. The device according to claim 5 wherein said power transmitting and securing member further comprises a conductive liner interfacing between said shaft sheath and said axial end surface of said power transmitting and resilient member for protection from abrasion.

7. The device according to claim 6 wherein said conductive liner is made of stainless steel, and said shaft sheath is made of copper coated with nickel.

8. The device according to claim 5 wherein said shaft sheath is in electric connection to said power source via a conductive wire.

9. A laminating apparatus for laminating a sheet material to a thin film, comprising:

- a roller in contact with said thin film, moving through said thin film to heat and laminate said thin film to said sheet material;

- an electro-heating shaft wrapped by said roller, transforming electric energy into thermal energy transferred to said roller to heat said thin film, and driving rotation of said roller to move through said thin film;

- a power transmitting and resilient member in contact with an axial end surface of said electro-heating shaft in an axial direction of said electro-heating shaft for transmitting electricity from a power source to said electro-heating shaft; and

- a power transmitting and securing member coupled to said electro-heating shaft for compressing said power transmitting and resilient member therebetween, thereby continuously transmitting said electricity from said power source to said electro-heating shaft via said power transmitting and securing member.

10. The laminating apparatus according to claim 9 wherein said power transmitting and resilient member is a metallic spring.

11. The laminating apparatus according to claim 9 wherein said power

transmitting and resilient member is a conductive rubber.

12. The laminating apparatus according to claim 9 wherein said rotating shaft has a recess on a circumferential surface thereof for engaging with said power transmitting and securing member to confine said power transmitting and resilient member therebetween.

13. The laminating apparatus according to claim 12 wherein said power transmitting and securing member comprises:

a shaft sheath covering said axial end surface of said electro-heating shaft and having a slit aligned with said recess of said electro-heating shaft; and

a clipping element penetrating through said slit of said shaft sheath to engage with said electro-heating shaft at said recess so as to compress said power transmitting and resilient member between said shaft sheath and said axial end surface of said electro-heating shaft.

14. The laminating apparatus according to claim 13 wherein said power transmitting and securing member further comprises a conductive liner interfacing between said shaft sheath and said axial end surface of said power transmitting and resilient member for protection from abrasion.

15. The laminating apparatus according to claim 14 wherein said conductive liner is made of stainless steel, and said shaft sheath is made of copper coated with nickel.

16. A laminating apparatus for laminating a sheet material between a pair of thin films, comprising:

a first and a second rollers forming therebetween a passage, through which said sheet material and said thin films are transmitted to be heated and pressed by said first and second rollers;

a first and a second electro-heating shafts wrapped by said first and said second

rollers, respectively, transforming electric energy into thermal energy transferred to said first and said second rollers to heat said thin films, and driving rotation of said first and a second rollers to move through said thin films;

a first and a second shaft sheaths covering said axial end surfaces of said first and said second electro-heating shafts and in electric connected with said first and said second electro-heating shafts, respectively; and

a first and a second power transmitting and resilient members in contact with axial end surfaces of said first and said second electro-heating shafts in an axial direction of said first and said second electro-heating shafts for transmitting electricity from a power source to said first and said second electro-heating shafts, respectively.

17. The laminating apparatus according to claim 16 wherein said first power transmitting and securing member further comprises a first conductive liner interfacing between said first electro-heating shaft and said axial end surface of said first power transmitting and resilient member, and said second power transmitting and securing member further comprises a second conductive liner interfacing between said second electro-heating shaft and said axial end surface of said second power transmitting and resilient member.

18. The laminating apparatus according to claim 16 wherein each of said first and said second conductive liners is made of stainless steel, and each of said first and said second shaft sheaths is made of copper coated with nickel.

19. The laminating apparatus according to claim 16 wherein each of said first and said second power transmitting and resilient members is a metallic spring.

20. The laminating apparatus according to claim 16 wherein each of said first and said second power transmitting and resilient members is a conductive rubber.